

two cockroaches, but did not note when they were eaten, nor did I make any more experiments with this frog.

These experiments are hardly sufficient to form any conclusion as to the tastes of this Amphibian; but it would appear, if anything, to object to *Danais chrysippus* more than to *Delias eucharis*, and not very seriously to either. But sufficient opportunity for choice was not given.

A toad (*Bufo melanostictus*) which was also being fed on cockroaches, and had one in its cage at the time, did not touch a *D. chrysippus* put in on November 4th. But one such experiment is practically useless.*

A tree-frog did not eat some Skippers put in, but then as far as I saw it did not feed at all while I observed it.

* I note on August 24th, 1895, offering a large "glow-worm" to a small toad at Dehra Dun. The insect was followed about but left; and another small toad behaved in the same way. In this case the insect was probably too big: but subsequently a smaller one offered to a toad was not noticed. The toads were at liberty.

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*Description of Neptis praslini, Boisduval, and some species allied to*

*it.*—By LIONEL DE NICÉVILLE, F.E.S., C.M.Z.S., &c.

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*Neptis praslini*, Boisduval, and its allies form a very interesting little group of the large genus *Neptis*. They appear to be confined to the Moluccas, the Papuan group of islands, the Bismarck Archipelago, and Northern Australia. So long ago as 1832, Dr. Boisduval noted the very strong superficial resemblance of *Neptis* (*Limnitis*) *brebissonii*, Boisduval, from New Guinea, which is one of the species referred to in this note, to the butterflies of the genus *Tellervo*,† Kirby (*Hamadryas*, Boisduval, nec *Hamadryas*, Hübner, the type of the latter being *Papilio* (*Vanessa*) *io*, Linnaeus). The mimicry in this case by the brittle-winged edible *Neptis* of the leathery-winged unpalatable *Tellervo* is one of the most remarkable and complete in the entire range of the *Rhopalocera*. The sexes probably in all the species of the group here dealt with are well marked, the male having the inner margin of the forewing on the under-side and the costal margin of the hindwing on the upperside broadly furnished with closely-packed shining grey scales which are wanting in the female. Both wings of the female also are somewhat broader and more rounded than in the male. Several authors have placed "*Limnitis*" *praslini* and its allies in the genus *Athyma*, which is certainly incorrect; they are all true *Neptes*.

† *Tellervo*, Kirby, Allen's Naturalist's Library, New Edition, Lepidoptera, part i. Butterflies, vol. i, p. 28 (1894).

## 1. NEPTIS PRASLINI, Boisduval.



*Limenitis praslini*, Boisduval, Voy. l'Astrolabe, Ent., part i, p. 131, n. 2 (1832): d., Staudinger, Ex. Schmett., p. 146, pl. 1, female [nec male] (1886).

HABITAT: New Ireland (the Neu-Mechlenburg of the Germans) (Boisduval); Cooktown, Queensland, N.-E. Australia (Staudinger).

EXPANSE: ♂, ♀, 1.45 inches.

Dr. O. Staudinger has figured a female of *N. praslini* from Cooktown in N.-E. Australia, and says that the male hardly differs, but has a broad shining grey costal margin on the upperside of the hindwing, which is wanting in the female. I propose to consider Dr. Staudinger's figure as typical of the species. He goes on to say that "A somewhat larger but very similar species is the *N. brebissonii* of Boisduval from New Guinea, which I have received from Dr. Platen from Waigeu. This differs chiefly in the larger white spots, and in having a broad black costal margin on the underside of the hindwing. How it happens that these and several other similar species stand in Kirby under *Athyma*, I cannot say, as both species are so extremely similar to one another, and in this case it can hardly be considered to be mimicry." I am doubtful if Dr. Staudinger has correctly identified "*Limenitis*" *brebissonii*, described from New Guinea, as Boisduval makes no mention of the three prominent white spots in the discoidal cell of the forewing present in all the species of the group of *N. praslini*. I possess a single pair of this species from Cooktown kindly sent to me by Dr. O. Staudinger. It is of course possible that these specimens represent a species distinct from true *N. praslini*, but in the absence of New Ireland examples it is impossible for me to say. Boisduval's original description of this species from New Ireland is very short, the specific definition being contained in the words "hindwing crossed at the middle by a large white band."

This species mimics *Tellervo zoilus*, Fabricius. In life the eyes of both species are bright yellow. The specimen figured is a male.

## 2. NEPTIS LACTARIA, Butler.



*Athyma lactaria*, Butler, Ann. and Mag. of Nat. Hist., third series, vol. xvii, p. 98, n. 1 (1866); id., Godman and Salvin, Proc. Zool. Soc. Lond., 1878, p. 647; *Neptis praslina*, Kirsch [nec Boisduval], Mitth. Mus. Dresden, vol. i, p. 125, n. 94 (1877); id., Godman and Salvin, Proc. Zool. Soc. Lond., 1879, p. 158, n. 27; id., Oberthür, Ann. Mus. Civ. Genova, vol. xv, p. 503, n. 121 (1880); *Athyma* [sic] *praslina* [sic], Tryon, Second Ann. Report Adm. Brit. New Guinea, App. v, p. 118 n. 57 (1890); *Neptis papua*, Oberthür, Ann. Mus. Civ. Genova, vol. xii, p. 460, n. 40 (1878); id., Grose Smith, Nov. Zool., vol. i, p. 352, n. 110 (1894).

HABITAT: Aru Isles; var. 1 *a*, Dory (*Butler*); Rubi, N.-W. New Guinea; Mysore and Jobi Islands (*Kirsch*); New Ireland; mainland of New Guinea (*Godman* and *Salvin*); Vaigheu and Mount Epa in southern New Guinea; Doreï in New Guinea; Ceram (*Oberthür*); Mansinam and Humboldt Bay, N.-W. New Guinea (*Grose Smith*); Ké Isles; Stephansort and Constantinhafen, German New Guinea; Waigiou or Waygiou (*coll. de Nicéville*).

EXPANSE: ♂, 2·4 to 2·5; ♀, 2·5 to 2·8 inches.

DESCRIPTION: MALE and FEMALE. UNDERSIDE, *hindwing* differs from typical *N. praslina*, Boisduval, from Cooktown, N.-E. Australia, in having the large discal white area of lesser size, not continued as far as the costal nervure and joined to the short basal streak in the subcostal interspace as it is in that species, in *N. lactaria* the basal streak is quite isolated from the discal white area. In other respects the two species, as far as my specimens go, do not differ.

Dr. A. G. Butler gives an excellent description of the species (except that he does not say what sex he is describing) as *Athyma lactaria* from the Aru Islands, and a var. 1 *a* "with a narrower band on the hindwing" from Dory, the latter probably being the Dorey or Dorei of N.-W. New Guinea. Messrs. Godman and Salvin also record *A. lactaria* from the mainland of New Guinea. Herr Th. Kirsch records it as *N. praslina* from Rubi on the mainland of N.-W. New Guinea, and from the neighbouring islands of Mysore and Jobi. He says: "In

the specimens collected in the first two localities [Kordo and Ansus] (on the islands Mysore and Jobi) the white marking is excessive, as the outermost of the three existing spots of the elongated band [*i. e.*, the large triangular spot at the end of the discoidal cell of the forewing] is lengthened towards the outer margin, and runs into the [submarginal] row of spots. In the single specimen taken in Rubi on the mainland of New Guinea the white markings are, on the other hand, reduced to such an extent that the linear row of marginal spots on the underside of the hindwing is altogether wanting, and the inner row is formed of much smaller spots." Messrs. Godman and Salvin record *N. praslini* from New Ireland without remark. M. Oberthür records *N. praslini* from Vaigheu and Mount Epa in southern New Guinea. He notes that the description of the species by Boisduval is very short, and would apply equally well to many closely-allied species of the same group, and that he considers it better to sink the *Neptis papua* described by himself to *N. praslini*. Mr. Henry Tryon records *N. praslini* as *Athyma praslina* from Milne Bay in British New Guinea. M. Oberthür again described the species as *Neptis papua*, Boisduval MS., from Doreï in New Guinea and from Ceram. As noted above, he has sunk this name under *N. praslini*. Mr. Grose Smith records a long series of both sexes of *N. papua* from Mansinam and Humboldt Bay, N.-W. New Guinea, and says that "The white band which crosses the hindwing is of variable width, especially in the male."

Of *N. lactaria*, as identified by me, I possess three pairs from the Ké Isles, two females from Stephansort, and one pair from Constantinhafen, both in German New Guinea, and two females from Waigiou. They are characterised by having the discal white band of the hindwing broad, occupying seven interspaces on the upperside, eight on the underside, broadest in the discoidal interspace, regularly tapering from thence to the abdominal margin, which it does not quite reach. The additional portion on the underside lies in the subcostal interspace. On the underside of the hindwing there are two marginal series of white spots, the anterior one consisting of eight large rounded spots, the posterior one of a similar number of smaller linear spots.

This species mimics *Tellervo zoilus*, Fabricius. The specimen figured is a female from New Guinea.

## 3. NEPTIS NAUSICAA, n. sp.



HABITAT : Stephansort, German New Guinea.

EXPANSE : ♂, 2·4 ; ♀, 2·5 inches.

DESCRIPTION : MALE. UPPERSIDE, *both wings* black, with shining pearly-white markings. *Forewing* with a short clavate streak towards the base, a quadrate spot at the middle, and a large triangular spot beyond the end of the discoidal cell; two small outwardly-obliquely-placed subapical spots; two much larger, the upper the larger of the two, well-separated rounded discal spots divided by the second median nervule; three widely-separated submarginal dots. *Hindwing* with a broad even-edged discal band, of equal width throughout, occupying seven interspaces, commencing on the inner margin and ending on the subcostal nervule; a submarginal series of five small round spots. UNDERSIDE, *forewing* as on the upperside, but the four spots on the disc a little larger; the submarginal series consisting of six spots. *Hindwing* with a short streak towards the base of the wing in the subcostal interspace; the discal band a little broader than on the upperside, and with a small additional portion in the subcostal interspace; an obsolete series of elongated spots between the discal band and the submarginal series of spots; the latter consisting of eight spots, which are larger than on the upperside. FEMALE. UPPERSIDE, *forewing* differs from the male in the submarginal series of spots being six in number instead of three. *Hindwing* has the discal band extended by an additional portion in the subcostal interspace in one specimen, but not in the other; the posterior edge of the discal band irregular, in the male it is even. UNDERSIDE, *forewing* as in the male. *Hindwing* with the additional portion of the discal band in the subcostal interspace much larger than in the male.

*N. nausicaa* differs from *N. lactaria*, Butler, in the *forewing* in having the two discal spots divided by the second median nervule much smaller and consequently well separated, in *N. lactaria* they are conjoined; in the *hindwing* in having the discal band of the same width throughout and reaching the abdominal margin, in *N. lactaria*

it is of great width anteriorly, rapidly narrowing to the abdominal margin, which it does not quite reach; the anterior end of the discal band in *N. nausicaa* reaching much closer to the outer margin than in *N. lactaria*. On the underside of the hindwing there is a single subcostal streak, in *N. lactaria* this streak is much shorter, with an additional round spot placed posterior to it close to the base of the wing; and in *N. lactaria* there is a marginal series of eight linear spots, which are entirely wanting in *N. nausicaa*.

I am indebted to Mr. Henley Grose Smith for the gift of the specimens described.

This species mimics *Tellervo zoilus*, Fabricius. The specimen figured is a male.

#### 4. NEPTIS NEMEUS, n. sp.



HABITAT: New Britain.

EXPANSE: ♂, 2.2 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* black, with shining pearly-white markings. *Forewing* with a rather long clavate streak reaching to the base, a rather rounded spot at the middle, and a triangular spot beyond the end of the discoidal cell; three small outwardly-obliquely-placed subapical spots; two much larger, the upper the larger of the two, almost conjoined discal spots divided by the second median nervule; a submarginal series of six small spots, the series broken in the middle; a barely traceable marginal series of dots; an elongated bluish-white streak on the middle of the sutural area. *Hindwing* with the middle occupied by an oval patch consisting of five portions; a submarginal series of six linear spots. UNDERSIDE, *forewing* with a pale streak defining the basal half of the subcostal nervure; all the spots on the disc more prominent than on the upperside, particularly the marginal linear series. *Hindwing* with the oval quinquelpartite discal area as on the upperside; anterior to which there is a small round basal spot, and a lengthened pale subcostal streak; the submarginal spots

more prominent than above ; with an additional marginal linear series of eight spots.

Apart from other characters, the oval white patch confined to the middle of the hindwing will at once serve to distinguish this species from *N. lactaria*, Butler, and *N. nausicaa*, de Nicéville.

Described from a single example which I have received from Mr. Henley Grose Smith.

This species mimics *Tellervo æquicinctus*, Godman and Salvin, or *T. hiero*, Godman and Salvin.

##### 5. NEPTIS DORCAS, Grose Smith.

*N. dorcas*, Grose Smith, Nov. Zool., vol. i, p. 354, n. 115 (1894) ; id., Grose Smith and Kirby, Rhop. Ex., pl. *Neptis* i, figs. 7, 8 (1895).

HABITAT : Biak Island, N.-W. New Guinea (*Grose Smith*).

This species is quite distinct from all those previously mentioned. It may be known from *N. lactaria*, Butler, as identified by me, by the extreme irregularity of the outer edge of the discal white band of the hindwing, that portion of the band lying in the discoidal interspace being outwardly greatly lengthened and projecting far beyond the line of the other portions. The sex of the two specimens described is not stated, but they are probably females.

In describing this species Mr. Henley Grose Smith refers twice to the "white oval patch" of the hindwing in *N. praslini* from New Ireland. From this I gather that Mr. Grose Smith identifies *N. praslini* with the species I have described as *N. nemeus*, though my specimen is from a different island, and may be distinct from the New Ireland form, and that he calls the species I identify as *N. lactaria*—*N. papua*. I have given my reasons above for preferring to apply Boisduval's name to the species which Dr. Staudinger has figured, and M. Oberthür has described as *N. papua*, and which the latter writer says is probably the true *N. praslini*.

This species mimics *Tellervo evages*, Godman and Salvin,\* or *T. mysoriensis*,† Staudinger.

##### 6. NEPTIS SATINA, Grose Smith.

*N. satina*, Grose Smith, Nov. Zool., vol. i, p. 352, n. 111, pl. xii, fig. 3, ? male (1894).

HABITAT : Humboldt Bay, N.-W. New Guinea (*Grose Smith*).

This species differs from all those previously named in having no

\* This name is printed *ovages* by Kirby in Allen's Naturalist's Library, vol. i, p. 29 (1894).

† Spelt *misoriensis* on p. 28 and pl. vi of the same work.

streaks in the discoidal cell or triangular spot beyond the cell on the upperside of the forewing, though they are present on the underside. On the upperside of the hindwing the submarginal series of white spots is also absent.

7. *NEPTIS BREBISSONII*, Boisduval.



*Limenitis brebissonii*, Boisduval, Voy. l'Astrolabe, Ent., part i, p. 132, n. 3 (1832).

HABITAT: New Guinea (*Boisduval*); Waigiou.

EXPANSE: ♀, 2·5 inches.

DESCRIPTION: FEMALE. UPPERSIDE, *both wings* black. *Forewing* with a small rounded spot just beyond the middle and a rather larger one at the end of the discoidal cell, both indistinct, white, irrorated with black scales; a subapical, outwardly oblique, well separated series of four white spots, the anteriormost very small, the second elongated and the largest, the third also elongated, rather smaller than the second, the fourth round, a little larger than the first; two large white spots on the disc, divided only by the second median nervule; two elongated white spots on the middle of the inner margin, divided only by the submedian nervure; a submarginal series of six small white spots, the four anterior ones round and pure white, the two posterior ones elongated, somewhat sullied with black scales. *Hindwing* with a broad discal white band, divided into eight portions by the crossing veins, not quite reaching the abdominal margin, ending anteriorly on the first subcostal nervule, the inner edge of the band straight, the outer edge somewhat irregular; a barely traceable submarginal series of whitish spots between the veins. UNDERSIDE, *both wings* black. *Forewing* with a prominent quadrate spot just beyond the middle, a triangular spot beyond the end of the discoidal cell; the subapical and discal spots as on the upperside; a submarginal series of eight prominent quadrate white spots, the series broken in the middle, as there is only a small (instead of a large) spot in the second median interspace; an

obscure marginal series of elongated white spots between the veins. *Hindwing* with a short white streak on the costa at the extreme base of the wing; posterior to which is another short white streak; the discal band as above but wider on both edges; a prominent submarginal series of eight quadrate white spots; beyond which is a marginal series of six elongated white spots.

This is a very distinct species, differing from *N. praslini*, Boisduval, *N. lactaria*, Butler, *N. nausicaa*, de Nicéville, *N. nemeus*, de Nicéville, *N. dorcas*, Grose Smith, and *N. satina*, Grose Smith, in having two white spots on both sides of the forewing on the sutural area, these spots being absent in all the species mentioned above. Dr. Boisduval's description of it is very short, but as far as it goes it agrees with my specimen described above.

Described from a single example sent to me by Dr. O. Staudinger.

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